



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0949; Project Identifier AD-2021-00115-E; Amendment 39-21915; AD 2022-02-18]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all General Electric Company (GE) CF6-80C2A1, CF6-80C2A2, CF6-80C2A3, CF6-80C2A5, CF6-80C2A5F, and CF6-80C2A8 model turbofan engines with an installed left-hand rear mount link assembly, part number (P/N) 1846M23G01. This AD was prompted by the manufacturer reducing the life limit for the affected left-hand rear mount link assembly. This AD requires revising the airworthiness limitations section (ALS) of the existing engine maintenance manual and the operator's existing approved continuous airworthiness maintenance program (CAMP). The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552-3272; email: aviation.fleetsupport@ae.ge.com; website: <https://www.ge.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0949.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0949; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7132; fax: (781) 238-7199; email: Scott.M.Stevenson@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all GE CF6-80C2A1, CF6-80C2A2, CF6-80C2A3, CF6-80C2A5, CF6-80C2A5F, and CF6-80C2A8 model turbofan engines with an installed left-hand rear mount link assembly, P/N 1846M23G01. The NPRM published in the *Federal Register* on November 5, 2021 (86 FR 61086). The NPRM was prompted by a report from the manufacturer reducing the life limit for the affected left-hand rear mount link assembly. The left-hand rear mount link assembly was redesigned and certified in 1999, and the FAA subsequently issued AD 2000-12-08 (65 FR 39536, June 27, 2000), mandating the replacement of the affected left-hand rear mount link assembly with a part eligible for installation. Later, analysis from the aircraft manufacturer of stress loads in their extended service goal mission profile revealed loads during the take-off phase that were not included at certification. These additional loads result in a reduced life limit on the left-hand rear mount link assembly. In the NPRM, the FAA proposed to require revising the ALS of the GE CF6-80C Engine Manual, GEK92451, as applicable to each affected engine model, and the operator's existing approved CAMP to incorporate a reduced life limit for the affected left-hand rear mount

link assembly, P/N 1846M23G01. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter, FedEx Express, who supported the NPRM without change.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, including the removal of the reference to GE CF6-80C2 Engine Manual, GEK92451, this AD is adopted as proposed in the NPRM.

Related Service Information

The FAA reviewed GE CF6-80C2 Temporary Revision (TR) 05-0276, dated July 13, 2021 (GE TR 05-0276), and GE CF6-80C2 TR 05-0277, dated July 9, 2021 (GE TR 05-0277). GE TR 05-0276 and GE TR 05-277 provide the new life limit to be updated into the ALS, for the affected left-hand rear mount link assembly, in the existing engine maintenance manual.

Costs of Compliance

The FAA estimates that this AD affects 220 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Revise ALS of Engine Manual and the operator's existing approved CAMP	2 work-hours x \$85 per hour = \$170	\$0	\$170	\$37,400

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:
2022-02-18 General Electric Company: Amendment 39-21915; Docket No. FAA-2021-0949; Project Identifier AD-2021-00115-E.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to General Electric Company (GE) CF6-80C2A1, CF6-80C2A2, CF6-80C2A3, CF6-80C2A5, CF6-80C2A5F, and CF6-80C2A8 model turbofan engines with an installed left-hand rear mount link assembly, part number (P/N) 1846M23G01.

(d) Subject

Joint Aircraft System Component (JASC) Code 7120, Engine Mount Section.

(e) Unsafe Condition

This AD was prompted by a report from the manufacturer on an updated analysis of stress loads during take-off, which revealed a stress increase with take-off phase loads that were not included at certification. The FAA is issuing this AD to lower the life limit of the left-hand rear mount link assembly and prevent the failure of the engine mount system. The unsafe condition, if not addressed, could result in separation of the engine from the airplane and loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Within 180 days after the effective date of this AD, revise the airworthiness limitations section of the existing engine maintenance manual, and the operator's existing approved continuous airworthiness maintenance program, by reducing the life limit of the left-hand rear mount link assembly, P/N 1846M23G01, from 50,000 flight cycles (FCs) to 23,800 FCs.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ECO Branch, send it to the attention of the person identified in paragraph (i) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

For more information about this AD, contact Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7132; fax: (781) 238-7199; email: Scott.M.Stevenson@faa.gov.

(j) Material Incorporated by Reference

None.

Issued on January 14, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.